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# Network dynamics in the long-term period after divorce

**Elisabeth L. Terhell, Marjolein I. Broese van Groenou,  
& Theo van Tilburg**

*Vrije Universiteit*

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## ABSTRACT

This study first identified types of change in the size of the personal network over a period of 12 years following divorce. Second, differences in network change were explained by taking into account divorce characteristics, personal capacities, and structural conditions. Personal interviews were conducted in three waves of a 12-year longitudinal study with 40 men and 64 women who divorced in 1987 or 1988. Most divorcees experienced network losses shortly after the divorce and in half of the cases these losses were not compensated for in the later years after divorce. For some, divorce brought merely network gains, albeit in the longer term. Personal capacities and structural conditions did not differ significantly across participants in different types of network change. Characteristics of the divorce (attitude toward divorce and conflicts with the ex-partner after divorce) partly explained differences in network change after divorce.

KEY WORDS: divorce • longitudinal studies • personal network

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Divorce is a life transition that is often associated with major changes in one's personal well-being. A large number of studies have described the psychological consequences of divorce and the ability of individuals to recover from the marital break-up (Amato, 2000; Kitson & Morgan, 1990). Divorce also involves a disruption of the personal network. Pools of available (supportive) contacts and opportunities for social interaction are likely to decline as the networks of ex-spouses are separated (Milardo, 1987).

Several studies reported on changes in relationships shortly after divorce. A common finding is that about half of the relationships in the pre-divorce

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network are lost within 2 years after divorce (Broese van Groenou, 1991; Rands, 1988; Spicer & Hampe, 1975). The losses mostly concern relationships that were shared with the former spouse, such as in-laws and mutual friends. Because the few available longitudinal studies on personal network changes are restricted to the earlier years after divorce, little is known about the recuperation of these network losses. More insight is needed on the long-term course of changes in personal networks after divorce, because psychological adjustment to divorce may be strongly associated with adjustment to the disruptions in the personal network (Hughes, 1988; Smerglia, Miller, & Kort-Butler, 1999).

The present study contributes to earlier network research by determining the course of network change over 12 years after divorce. The first aim of the study was to describe different types of change in the size of the personal network over the long term after divorce. Second, the study aimed to provide insight into the determinants of different types of change in network size.

### **Types of change in network size**

Studies on the psychological adjustment to divorce suggest that for some individuals divorce may represent a temporary crisis with heightened levels of stress during and following the separation to which people adjust within a few years. For others, divorce may involve a source of chronic strains that lead to infinite periods of stress (Amato, 2000). We assume that these patterns of crisis and chronic strains also apply to the reorganization of the personal network after the divorce. Network losses may extend over either a short or longer period. As such, changes in the personal network may reflect crisis (temporary disturbance) or strain (long-lasting burden). Yet, divorce may not always be accompanied by network decline. Some studies on network change found that growth in the personal network takes place after the divorce (D'Abate, 1993; Hughes, Good, & Candell, 1993). Albeck and Kaydar (2002) reported an increased availability of friends a few years after the divorce and suggested the existence of a period of 'blossoming' of the network. This gain of network members may also be either temporary or long lasting.

In addition to the network crisis and strain types, we suggest that two other types of change may occur: temporary and long-lasting network extension. Although divorce may involve network change over the short or longer term for many, we take into account that divorcees may have stable networks over time. Hence, we suggest that a network stability type may exist besides the four types of network change. In this study, we first examine whether the five types of change and stability in total network size can be identified. Because network losses and gains after divorce may not apply equally to all types of relations, we also examine the change in the size of six partial networks (kin, in-laws, friends, acquaintances, neighbors, and colleagues).

Our study goes beyond a description of types of network change by examining why some individuals are faced with (persistent) social losses

and others are able to keep or enlarge their networks after the marital break-up. We assume that there are three types of determinants of network change: (i) divorce-related characteristics, (ii) personal capacities, and (iii) structural conditions.

### **Divorce characteristics**

For most, divorce is a major life event. There is probably not 'an easy way to divorce,' but the emotional impact and legal difficulties of the divorce process vary largely among divorcees (Kitson, 1992). For some, divorce may be an emotional and social liberation from a problematic marriage, whereas for others it may be a very undesired and much regretted event. Many divorcees have conflicts with the ex-partner about divorce settlements in the first year after divorce, but for some these conflicts may take many years (Fischer, de Graaf, & Kalmijn, in press). Negative feelings toward the divorce and preoccupation with conflicts regarding living arrangements and child custody issues may deter one's interest from maintaining personal relationships and may hinder the development of new relationships (Jacobson, 1983). Contacts with adult children may decrease when the ex-spouses are mixed up in long-lasting conflicts (Kalmijn & de Graaf, 2000). In contrast, a difficult divorce may trigger close kin and personal friends to provide emotional and social support. A study by Thuen and Eikeland (1998) showed that persons who initiated the divorce perceived themselves to be more integrated in personal networks and engaged in more social activities than persons whose ex-partner initiated the divorce. Noninitiators relied on a relatively large number of relationships for emotional support (Duran-Aydintug, 1998; Thuen & Eikeland, 1998). We hypothesize that positive aspects of the divorce, as indicated by being the initiator, having a positive attitude toward the divorce, or experiencing fewer conflicts regarding legal arrangements, increase the chances that the temporary or long-lasting network extension type will occur. Divorcees with negative divorce aspects are more likely to be found among persons with a network strain or crisis pattern.

### **Personal capacities**

Personal capacities to interact with others may be important in dealing with network changes after divorce. Personal preferences and needs, as directed by one's personality, may determine the actual investment of time and energy in different types of personal relations. In various studies, characteristics of the personal network were positively associated with personality characteristics such as extraversion (Lang, Staudinger, & Carstensen, 1998), emotional stability (Lang et al., 1998), and self-esteem (Smerglia et al., 1999). A stronger sense of self may make people less fearful of being different or inadequate, being rejected, or making a wrong impression, when dealing with old and new network relationships. Also, the inability to express one's emotions in a social context may make the initiation of social supportive interactions more difficult (Barbee et al., 1993). Self-disclosure

was also found to be positively correlated with the degree to which persons thought that they could confide in network relations or turn to for help (Stokes, 1985). As emotionally unstable personalities seem to report more interpersonal stressors (Gunthert, Cohen, & Armeli, 1999), emotional stability seems to be a personal condition that reduces stressful interactions with network members and the need for network support.

We assume that divorcees with personal capacities, such as extraversion, emotional stability, self-esteem, and emotional expressiveness, experience less difficulty in the mobilization and development of personal network relationships after divorce. It is expected that network changes of participants with such personal capacities are more likely to be according to the crisis, temporary and long-lasting extension types. Divorcees with few personal capacities may face more problems in the compensation of network losses, and are more likely to be found in the chronic strain type.

### **Structural conditions**

Divorce is likely to affect one's structural conditions (moving to another neighborhood, economic hardships, sole parenting responsibilities) and thereby the opportunities and the time to invest in relationships (e.g., Gerstel, 1988; Moore, 1990). Structural conditions are likely to contribute to network losses after divorce. Moreover, they may restrict the development of new relationships, contributing as such to the existence of the network strain type. For the explanation of differences in network changes after divorce, we assume that five types of structural conditions (a higher education, having a paid job, a partner, children at home, and residential mobility) are important.

Level of education is likely to be positively associated with network size (Campbell, Marsden, & Hurlbert, 1986; Moore, 1990). The higher educated may have more social skills and are, as such, better equipped for the use of various network ties, in particular with nonkin (Hall & Wellman, 1985; Kawachi, Kennedy, Lochner, & Prothrow-Smith, 1997). Having a paid job provides opportunities to develop friendships with and through colleagues, but restricts the time to invest in relations with kin and friends outside the work setting (Baruch, Biener, & Barnett, 1987). Many divorcees remarry in the first years after the marital break-up (Coleman, Ganong, & Fine, 2000; Uunk, 1999), and this may improve their opportunities for personal relationships. A (marital) partner provides easy access to new relationships with in-laws and friends, and may increase the time and financial budget available for social interactions. The presence of (young) children at home may increase as well as decrease the opportunities to maintain relationships. Having children at home restricts the time to meet people outside the domestic circle (Munch, McPherson, & Smith-Lovin, 1997), but being restricted to the local neighborhood brings about more frequent interactions with neighbors and other parents (Campbell & Lee, 1990; Wellman & Wellman, 1992). Owing to sole parenting responsibilities, it may also be more difficult for the divorced to actively engage in social leisure activities. Finally, residential moves are common among divorcees and moving

decreases the opportunities for face-to-face contacts with friends and former neighbors. However, as time passes and people get settled within their new neighborhood, relations with new friends and neighbors may develop (Larner, 1990; Magdol, 2000).

### **Demographic characteristics**

Sex differences are known to exist in both post-divorce network characteristics and in their determinants. It was observed that men were more likely to interact in new and casual ties, including a new partner relationship, whereas women tended to maintain and intensify contacts with relatives and intimate pre-divorce friends (Broese van Groenou, 1991; Gerstel, 1988; Rands, 1988). With regard to sex differences in network determinants, it was shown that women's structural resources were more likely to be restricted after divorce than men's (Poortman & Kalmijn, 1999). However, women differed positively from men in personal capacities that may facilitate the mobilization and maintenance of contacts (Barbee et al., 1993) and aspects of the divorce (Pettit & Bloom, 1984). We argue that aging may generally be associated with increased personal and structural restrictions that may reduce the capacity to develop or maintain relations.

## **Method**

### **Respondents**

Personal interviews were conducted from January to August 1988 (T1) with 150 respondents who participated in the study 'Network changes after divorce' (Broese van Groenou, 1991). Participants who divorced from either a married or unmarried cohabitation partner were selected through lawyers, various divorce agencies, and the media (advertisements in national and regional press and radio). Ex-partners of persons who were selected through these channels were also approached with a request to participate in the study. The total sample was composed of 41 ex-couples and 68 respondents who participated in the study without their ex-partner. The T1-interview took place on average 4.2 months after the divorce ( $SD = 2.1$ , with a minimum of 0.3 and a maximum of 10 months). The divorce date represents the day at which one or both ex-partners had left the (marital) home permanently.

In the period from September 1988 to May 1989, a follow-up was carried out among 137 (91%) of the T1-respondents. On average, respondents had been divorced at T2 for a mean of 1.1 years ( $SD = 0.2$ , range 0.7–1.5). Of the 13 T1-respondents who did not participate at T2, 6 had returned to their ex-partner. These respondents were excluded from the study because the ex-partners' networks are likely to be strongly interconnected and, therefore, not comparable with networks of divorced respondents who stayed single or started a new partner relationship. Of the other T1-respondents who did not participate at T2, three had moved and their new addresses could not be traced, and four refused further cooperation.

In 1999 and 2000, T3 involved interviews with 104 respondents (76% of the T2-respondents). By then, the mean time that had passed since divorce was

12.1 years ( $SD = 0.2$ , range 11.6–12.6). Of the other 33 T2-respondents, 3 had died and a total of 17 respondents refused to cooperate at T3, of which 10 felt that participation was too much of a psychological burden because it would bring back divorce-related memories. Furthermore, 13 persons could not be contacted because they had either gone abroad (4), new addresses could not be traced (5), or people had unlisted telephone numbers and did not return a reply card (4).

The interviews, carried out by trained interviewers, lasted approximately 2 hours, and covered the personal network, the settlement of the divorce, the new partner relationship, coping skills, psychosocial well-being, and physical health. Data were analyzed from 104 respondents for whom network data were available at all three time points. Characteristics of the respondents are presented in Table 1. More than half ( $n = 64$ ) were female. As T0 refers to the year prior to the divorce, age at T0 is respondents' age at 6 months before the divorce. On average, the respondents were 38.4 years old at T0 ( $SD = 8.7$ , range 23–64) and had been married for 12.9 years on average ( $SD = 8.9$ , range 0.4–35.3). Seven respondents had not been formally married to their ex-partners, but had separated after cohabitation.

Using multivariate logistic regression, respondents who could not be contacted at T2 or T3 ( $n = 16$ ), who refused to be interviewed at T2 or T3 ( $n = 21$ ), and on whom data were available at all three time points ( $n = 104$ ) were compared with regard to sex, age, total network size at T0, and T1-attitude toward the termination of the (marital) relationship. Compared with the respondents who refused cooperation at T2 or T3, the respondents on whom data were available at all three time points had a more negative attitude toward the termination of the (marital) relationship ( $p < .05$ ). No differences were found between the respondents who could not be contacted at T2 or T3 and the respondents on whom data were available at all three time points.

## Measurements

**The personal network.** The personal network was identified with the same delineation procedure at all observations. The first interview included a retrospective identification of the personal network in the year prior to the divorce (T0), as well as the network at the time of the interview (T1). Network

**TABLE 1**  
**Sample characteristics ( $N = 104$ )**

	T0	T2	T3
Age ( $SD$ )	38.4 (8.7)	40.0 (8.8)	51.0 (8.7)
With a paid job (%)	71	73	75
With partner (%)	100	23	56
Household composition			
Single household (%)	–	49	39
Single-parent family (%)	–	42	15
Couple without children (%)	34	4	22
Couple with children (%)	66	2	23
Other adults (no partner) (%)	–	3	–



members were identified by a combination of the exchange method (McCallister & Fischer, 1978; Van Sonderen, Ormel, Brilman, & Van Linden van den Heuvell, 1990) and the role relation method (Kleiner & Parker, 1976; Van Sonderen et al., 1990). For the exchange method, persons with whom the divorced exchanged significant transactions were identified. Nine name-generating questions were posed: 'With whom do you discuss personal problems?,' 'With whom do you discuss (problems at) work?,' 'Who helps you and who do you help with household chores?,' 'From whom do you borrow money and to whom do you lend money?,' 'Who helps you with information about the settlement of the divorce or other formal matters?,' 'Who do you join to go out or to drink something like a cup of coffee?,' 'Who do you join to practice sports or a hobby?'. Respondents could identify a maximum of 10 persons in response to each of these questions. The role relation method is used in addition to the exchange method to assure that the new partner, both parents, all siblings, and all children of the respondent who were aged over 18 years old at the time of the interview were identified. Network size was counted as the total of network members identified by at least one exchange question or with whom a role relation exists. Broese van Groenou, van Sonderen, and Ormel (1990) reported test-retest reliability figures of 74% for the exchange method and above 90% for questions about role relations for members with fixed roles (e.g., first-degree relatives).

We distinguished eight partial networks on the basis of relationship type: (i) the ex-partner (i.e., the partner from whom the respondent divorced in 1987 or 1988); (ii) the new partner with whom a relationship was initiated after the focal divorce; (iii) kin including foster and step relationships; (iv) in-laws including (step) family of the ex-partner and the new partner, and persons related by marriage of own family members; (v) friends; (vi) acquaintances; (vii) (former) neighbors; and (viii) (former) colleagues. The sizes of the partial networks were computed as the numbers of individuals in each of these relationship categories. The sum of the partial network sizes equals the total network size.

**Divorce characteristics.** Characteristics of the focal divorce assessed at T1 were initiator of the divorce, attitude toward the termination of the (marital) relation, and judicial settlement of divorce. Respondents were asked 'Who took the initiative of the divorce?,' and indicated whether the initiator was the ex-partner, the respondent, both in consultation, or both separately. In the analysis, we dichotomized the initiator status into 1 = the ex-partner and 2 = respondent or both. The attitude toward the focal divorce was indicated on a 5-point scale, ranging from *very negative* (1) to *very positive* (5). For the 97 respondents who separated from their marital partner, the nature of the judicial settlement of the divorce was indicated on a 5-point scale, ranging from *very difficult* (1) to *very easy* (5). At T3, respondents were asked how often they had been in conflict with their ex-partner about the division of household furniture, about housing arrangements for themselves or their ex-partners, and about the place of residence of children or contact with children. Answers were categorized as never to seldom conflicts (0) versus often to very often (1). The 'never to seldom conflicts' category for the question on conflict with the ex-partner about the place of residence of children or contact with children also included respondents who did not have (younger) children with the ex-partner ( $n = 43$ ).

**Personal capacities.** The expression of emotions in a social context was assessed at T1 by the emotional expressiveness scale of the Coping with Loss Questionnaire (Schut, de Keijser, van den Bout, & Jaspers, 1991). Respondents indicated on a 4-point scale, ranging from *seldom or never* (0) to *often* (3), for each of five emotional expressive coping strategies, how often in the past 4 weeks they had used this strategy. Cronbach's  $\alpha$  for the emotional expressiveness scale was .79. The mean of the summed scores for emotional expressiveness was 8.2 ( $SD = 3.5$ , range 0–15).

Self-esteem, defined as (dis)satisfaction with oneself, was assessed at T1 by a Dutch adaptation of the Rosenberg Self-Esteem Scale (Helbing, 1982; Rosenberg, 1965). For the 17 items, respondents indicated on a 6-point scale the extent to which they agreed or disagreed with a judgment regarding the self. Scale scores ranged from 17 to 102. Cronbach's  $\alpha$  for the self-esteem scale was .88. The mean score for self-esteem was 70.8 ( $SD = 12.9$ ).

From the 'Big Five' aspects of personality (Gerris, 1998; Goldberg, 1981) two were assessed at T3: extraversion and emotional stability. Extraversion and emotional stability were both measured by six characteristics for which respondents indicated the degree of applicability on a 7-point scale. The extraversion characteristics were 'talkative,' 'introverted,' 'quiet,' 'reserved,' 'withdrawn,' and 'bashful'. For emotional stability these characteristics were 'anxious,' 'irritable,' 'touchy,' 'nervous,' 'fearful,' and 'high-strung'. Scale scores ranged from 6 to 42. Cronbach's  $\alpha$  was .90 for the extraversion scale and .82 for the emotional stability scale. The mean score for extraversion was 29.8 ( $SD = 7.6$ ) and for emotional stability was 29.6 ( $SD = 5.7$ ).

**Structural conditions.** Partner histories between the focal divorce and T3 were obtained retrospectively at T3 by asking whether one had been involved in one or more married cohabitations or unmarried cohabitations of 3 years or longer after the focal divorce. After the focal divorce, 46 respondents were still without a partner at T3 (Table 1). Four of these singles had separated from a second marriage or cohabitation between T2 and T3. At T3, 48 respondents were involved in a new (marital) cohabitation, and another 10 persons were involved in a partner relationship but did not share a household. Only two persons were in their second (un)married cohabitation at T3. In the analyses, partner status at T3 was used, indicating being involved in a partner relationship ( $n = 58$ ) versus being single ( $n = 46$ ).

Respondents' educational level at T1 was, on average, 12.5 years ( $SD = 3.3$ , range 6–18). Employment status was distinguished as employed (having a paid job at T0 and/or T3,  $n = 90$ ) versus not employed (no paid job at T0 and T3,  $n = 14$ ). A total of 28 respondents in the 'employed' category changed employment status within the observation period. The presence of children in the household at T0 and/or T3 ( $n = 84$ ) was contrasted with having no children in the household at all times of measurement ( $n = 20$ ). Changes in the presence of children during the observation period were present for 59 respondents. We did not include variables that reflected change in employment status or the presence of children in the household as predictor variables, because the tolerance of these variables in the regression analyses was too low (i.e., lower than .60). Residential mobility was operationalized as having moved at least once between T0 and T3. In the post-divorce period, a total of 88 respondents had moved at least once, 55 respondents moved between T0 and T2, and 73 between T2 and T3.

### Procedure

We studied changes in network size between T0, T2, and T3. T1 was excluded because the time interval between divorce and T1 was only 4 months on average.

Change in size was considered significant if there was more than a 10% difference in the number of network members identified at the previous observation. We used a proportional measure for change to account for the size of the network. For example, in case of loss or gain of three network members, change is more likely to occur in larger networks than in smaller ones. The first quartile score of the T0-network size, 14, guided adopting the level of 10%. In this case, at least two network members should be added or lost for the smaller networks to assess the change as sufficiently reliable.

Theoretically, nine patterns of change and stability in total network size over time could be distinguished: decrease, stability, or increase from T0 to T2 multiplied by decrease, stability, or increase from T2 to T3. We condensed the nine possible network patterns into five theoretically interesting types (see also the introduction). Table 2 lists the names of the five types and the patterns that fit each. The first type, stability, takes into account that the total network size has not changed; network size at T0 equals size at T2 and T3. Types 2 through 5 represent the hypothesized change types, respectively, the chronic network strain (combinations of network loss and stability at T2 and T3), network crisis (network loss at T2 and gain at T3), temporary network extension (network gain at T2 and loss at T3), and long-lasting network extension (combinations of network gain and stability at T2 and T3). Analyses were conducted on respondents in the four types of network change. We excluded respondents in the stable network type because they were too small in number ( $n = 3$ ).

ANOVAs and cross-tabulation were used to examine differences among respondents in the four network change groups in demographics, divorce characteristics, personal capacities, and structural conditions. To explain differential probabilities on network change types, multinomial logistic regression analysis was applied. The regression equation included demographic variables and explanatory variables (divorce characteristics, personal capacities, and structural conditions) that were significant at the  $p < .05$  level in the bivariate analyses. We used this criterion for the inclusion of explanatory variables in the multivariate analyses because of the relatively large number of explanatory variables compared with the number of participants in our sample.

**TABLE 2**  
**Types of change in total network size**

Types of change	T0–T2	T2–T3	<i>n</i>
1 Stability	Stability	Stability	3
2 Chronic strain	Decrease	Decrease	13
	Decrease	Stability	16
	Stability	Decrease	11
3 Crisis	Decrease	Increase	30
4 Temporary extension	Increase	Decrease	15
5 Long-lasting extension	Stability	Increase	6
	Increase	Stability	5
	Increase	Increase	5

## Results

### Types of network change

The 104 respondents were divided over the four types of network change and stability as follows: 3% in the stability type, 38% in the chronic network strain, 29% experienced a network crisis, 14% had a temporary extension of the network, and 15% experienced a long-lasting network extension. Table 3 shows the number of respondents assigned to the four types of change along with their longitudinal network characteristics.

Participants in the chronic network strain type had a relatively large network prior to the divorce (18 network members on average), but lost about 5 network members in the post-divorce period. There was a decline in contacts with in-laws, friends, acquaintances, neighbors, and colleagues between T0 and T2, and again (apart from neighbor contacts) between T2 and T3. The total number of friends, acquaintances, and colleagues had been halved between T0 and T3. The number of kin in the network remained stable. The relative share of kin in the total network increased from 30% at T0 to 43% at T3.

Participants in the crisis type faced a 39% decline in the total number of network members shortly after divorce, but in the long run their network size increased again to the T0-level. As the previous type, the crisis was found in networks that were relatively large prior to the divorce. The short-term loss of network members was generally found among in-laws, friends, acquaintances, and neighbors. Decreases in numbers of kin and colleagues were relatively small. Between T2 and T3, relationships of all types increased in number, but the rise in total network size in the later years was mainly the result of the increase in numbers of kin and neighbors.

Participants in the temporary extension type had a smaller network prior to the divorce compared with the first two change types; their mean T0-size was 14.9. Their network increased by more than four network members to 19.4 at T2, but they lost over seven network members between T2 and T3. The increase was observed in the numbers of friends, acquaintances, and colleagues in the first year after divorce. At T2, the relative share of friends, acquaintances, and colleagues in the network was 66%. The number of kin relations remained stable in the period between T0 and T2. However, the shift toward nonkin relations was temporary, because a relatively sharp decline in relationships with friends, acquaintances, and colleagues was perceived in the later years after divorce. A sharp decline in the later years was also found in relationships with in-laws. Relatively few participants in the temporary network extension type mentioned their in-laws as interaction partners at T3.

Participants in the long-lasting network extension type had small networks prior to the divorce – on average 11 network members. The network extension was largest in the later years after divorce when the total network size increased by 23% from T2 to T3 (3.0 network members). The extension of the total network after divorce resulted in large part from the rise in the number of acquaintances in the short-term and the numbers of kin, friends, and neighbors in the longer term.

### Characteristics of divorcees in types of network change

Characteristics of the divorcees in the four network change types are listed in Table 4. Remarkable is the unequal distribution of men and women over the four types. Most women were in the crisis type and the long-lasting extension

**TABLE 3**  
**Division of participants across types of change for the size of the total network and mean size of total and partial networks over time for participants within specific network change types ( $N = 104$ )**

	Types of change for total network size														
	Chronic strain $T0 \geq T2 \geq T3$ $n = 40$			Crisis $T0 > T2 < T3$ $n = 30$			Temporary extension $T0 < T2 > T3$ $n = 15$			Long lasting extension $T0 \leq T2 \leq T3$ $n = 16$			Total $n = 104$		
	T0	T2	T3	T0	T2	T3	T0	T2	T3	T0	T2	T3	T0	T2	T3
Total network	18.7	15.4	13.0	19.5	11.9	18.7	14.9	19.4	12.0	11.6	13.2	16.2	17.1	14.5	15.0
Partial networks															
Ex-partner <sup>a</sup>	0.5	0.2	0.1	0.3	0.1	0.0	0.5	0.1	0.0	0.3	0.2	0.0	0.4	0.1	0.0
New partner	0.1	0.2	0.5	0.1	0.2	0.6	0.1	0.3	0.7	0.2	0.3	0.6	0.1	0.2	0.6
Kin	5.6	5.6	5.6	5.0	4.0	6.3	4.9	4.8	4.5	4.3	4.5	5.4	5.0	4.8	5.5
In-law	1.9	1.1	0.8	2.0	0.6	0.9	1.0	0.7	0.2	1.1	1.1	1.0	1.7	0.9	0.8
Friend	5.5	4.1	3.4	6.7	4.3	5.3	5.6	8.2	4.3	3.6	3.6	4.9	5.5	4.8	4.3
Acquaintance	2.9	2.3	0.9	3.3	1.5	1.8	1.3	2.8	1.5	1.3	2.4	2.1	2.5	2.1	1.5
Neighbor	0.9	0.8	1.0	1.2	0.6	2.2	0.5	0.5	0.6	0.3	0.4	1.3	0.8	0.7	1.3
Colleague	1.5	1.2	0.8	0.8	0.6	1.5	1.1	1.9	0.2	0.6	0.8	1.0	1.1	1.0	1.0

*Note.*  $N = 104$  includes respondents in the network stability type.

<sup>a</sup>The ex-partner, referring to the partner from whom one divorced in 1987/1988, was only included in the network when he/she was identified by the network exchange method.

**TABLE 4**  
**Characteristics of participants in different types of change for the size of the total network: Demographics, divorce characteristics, personal capacities, and structural conditions (N = 101)**

	Types of change for total network size				$\chi^2$ or <i>F</i>
	Chronic strain <i>n</i> = 40	Crisis <i>n</i> = 30	Temporary extension <i>n</i> = 15	Long-lasting extension <i>n</i> = 16	
Demographic characteristics					
Women (%)	50	83	47	69	10.1*
Age at T0 (range 23–64)	39.9	38.2	37.0	35.0	1.3
Characteristics of divorce					
Initiator: ex-partner (vs. respondent alone or in consultation with ex-partner) (%)	53	33	40	38	2.9
Attitude toward termination of relation (range 1–5, negative–positive)	3.1	3.0	4.3	2.9	3.2*
(very) negative (%)	38	40	7	38	
negative or positive (%)	13	3	13	25	
(very) positive (%)	50	57	80	38	
Conflicts with ex-partner:					
about division of household furniture (%)	13	10	7	44	11.4**
about housing (%)	20	30	27	31	1.2
about place of residence of children or about contact with children (%)	18	30	0	31	6.8
Judicial settlement of divorce (range 1–5, difficult–easy)	3.3	3.1	3.3	2.4	1.3
Personal capacities					
Emotional expressiveness (range 0–15)	8.1	8.7	8.5	7.7	0.4
Self-esteem (range 20–102)	69.2	72.3	76.2	67.3	1.6
Extraversion (range 11–42)	29.5	30.0	30.7	28.6	0.2
Emotional stability (range 10–41)	29.5	28.1	31.7	30.6	1.5
Structural conditions					
Education (in years) at T1 (range 6–18)	12.6	12.4	12.5	12.1	0.1
With a paid job between T0 and T3 (%)	88	83	87	88	0.3
Having a partner at T3 (%)	53	57	73	56	2.0
Children at home between T0 and T3 (%)	80	73	80	100	5.0
Moved between T0 and T3 (%)	88	87	67	94	5.2

\* $p < .05$ ; \*\* $p < .01$ .

type and most men were in the strain type and the temporary extension type. Differences between the network change types were also present with respect to divorce characteristics. In the strain, crisis, and long-lasting extension types, the participants felt either (very) negative or (very) positive about the divorce, but in the temporary extension type most of the participants (80%) evaluated the event as (very) positive. Conflicts about the division of household furniture were experienced by about 10% of the participants in the strain, crisis, and temporary extension types, but by almost half of the participants in the long-lasting extension type. Structural conditions did not differ across the participants in the four types. The majority had paid employment, took care of children at home, and had moved after the divorce. About half of the participants in the strain, crisis, and long-lasting extension type had a new partner, in comparison with 75% of the participants in the temporary extension type. Personal capacities were about the same for the participants in all types. For an examination of within-sex differences, we compared men in the strain type ( $n = 20$ ) with men in the temporary extension type ( $n = 8$ ), and women in the crisis type ( $n = 25$ ) with women in the long-lasting extension type ( $n = 11$ ). We found significant sex differences only in characteristics of the divorce. Men in the strain type were significantly more negative about the divorce than men in the temporary extension type. Women in the crisis type experienced fewer conflicts about the division of household furniture than women in the long-lasting extension type.

In sum, there were few statistically significant differences among the participants in the four network change types. Notable is that positive divorce aspects (i.e., having a positive attitude toward the divorce and experiencing fewer conflicts) were most often found among participants in the temporary extension type and least often among those in the long-lasting extension type.

### Regression results

Table 5 shows the results of the multinomial logistic regression of types of network change with the long-lasting extension type as the reference category. Results of the regression analyses with, respectively, the crisis type and the temporary extension type as reference categories are presented later in the text. The model that was analyzed included demographics (i.e., sex and age) and the divorce characteristics that were significant in the bivariate analyses (i.e., the attitude toward the termination of the relationship and conflicts with the ex-partner about the division of household furniture). The improvement brought about by the model of demographics and divorce characteristics was significant at the  $p < .001$  level. The results of the regression with the long-lasting network extension type as the reference category indicated that respondents in the chronic strain type and those in the crisis type were less likely to have conflicts with their ex-partner than those in the long-lasting extension type. The largest differences were, however, found between divorcees with a temporary and a long-lasting network extension. Respondents in the temporary extension type were more likely to be male, persons with a more positive attitude toward the termination of the relationship, and with fewer conflicts after the divorce. The analyses with, respectively, the crisis type and the temporary extension type as reference categories indicated that compared with the participants in the crisis type, those in both the strain type ( $OR = 0.18$ ,  $p < .01$ ) and the temporary extension type ( $OR = 0.07$ ,  $p < .01$ ) were more likely to be male. Compared with the participants in the temporary extension type,

**TABLE 5**  
**Multinomial logistic regression of types of change for total network size: Odds ratios and likelihood ratio tests ( $N = 101$ )**

	Types of change for total network size				Likelihood ratio tests $\chi^2$
	Chronic strain $n = 40$ OR	Crisis $n = 30$ OR	Temporary extension $n = 15$ OR	Long-lasting extension $n = 16$ OR	
Sex (male/female)	0.34 <sup>a</sup>	1.85 <sup>ab</sup>	0.13 <sup>bc</sup>	1.00 <sup>c</sup>	15.1**
Age at T0 (23–64 years)	1.06	1.04	1.00	1.00	4.0
Attitude toward termination of relation (range 1–5, negative–positive)	1.24 <sup>d</sup>	1.08 <sup>e</sup>	3.22 <sup>def</sup>	1.00 <sup>f</sup>	15.3**
Conflicts with ex-partner about division of household furniture (no/yes)	0.14 <sup>g</sup>	0.16 <sup>h</sup>	0.06 <sup>i</sup>	1.00 <sup>ghi</sup>	9.9*

*Note.* The odds ratios of the analyses with the long-lasting extension type as the reference category are presented. Additional analyses were conducted with other reference categories. Differences between odds ratios with superscripts c, h, or i were significant at the  $p < .05$  level, whereas differences between odds ratios with superscripts a, b, d, e, f, or g were significant at the .01 level.

\* $p < .05$ ; \*\* $p < .01$ .



those in the strain type ( $OR = 0.39$ ,  $p < .01$ ) and the crisis type ( $OR = 0.34$ ,  $p < .01$ ) had a less positive attitude toward the termination of the relation.

## Discussion

Research on network changes after divorce pointed to the high prevalence of network losses shortly after the separation of the ex-spouses, but did not reveal whether these losses could be compensated for in the longer term. In this study, we were able to distinguish a variety in changes in network size in the earlier and later years after divorce. Four different types of network change proved appropriate for understanding social adjustment to divorce. The empirical evidence for different types of network change after divorce calls for several conclusions.

First, stability in the network after divorce hardly ever occurs. Nearly all divorcees experienced over a 10% change in network size in the long term. Yet, we have to consider that the personal network is, in general, subject to change over time. Because of opportunities or dispositions of the focal individual and network members to maintain contact, there will always be changes in the number of network relationships (Van Tilburg, 1998). The likelihood of network change may be higher in a longer observation period and after a major social event. Our study stresses the fact that divorce is an event with large social consequences; the personal network is very likely to change after divorce, either positively or negatively.

Second, some of the divorcees were able to compensate for the loss of network members in the long run, whereas others were not. The implications of persistent network losses are potentially quite serious, as these losses may contribute to enduring periods of social distress (Ensel & Lin, 1991) and negatively affect the adjustment to the divorce over time (Miller, Smeglia, Gaudet, & Kitson, 1998). Why some experience a network strain, and others recover from the losses is not clear from our data. The participants in both types are comparable in structural, personal, and divorce-related characteristics. Most remarkable is the unequal distribution of men and women over the two types. Chronically impeded personal networks were more likely to be found among men than women. Gender-related differences in social investments and the degree of network overlap during marriage may be important in explaining the higher probability of males in the network strain type. More insight into sex-specific network changes may be provided by subsequent analyses of the interdependency of network changes of both ex-partners before and after marriage.

Third, divorce is not always accompanied by network losses. About 30% of our sample experienced more network gains than losses in the first years after divorce and these persons were in one of the two 'extension' change types. In particular, relationships with friends and acquaintances were added to the network. For the divorcees for whom the gains were temporary, these types of relationships were lost again over the years. For the persons in the temporary extension type, the divorce did imply network

loss in the long term, because the network size at T3 was smaller than the average network size at T0. Only participants in the long-lasting network type did gain in a social sense in both the short and the long term. The divorcees in the latter change type may have adjusted to the divorce by a (delayed) mobilization of network relations. Because they were more likely to perceive their divorce as problematic, they may have had a persistent heightened need or preference to be surrounded by (supportive) relations.

The question remains as to why the persons with the temporary extension experience a decrease in network size in the long run. It may be that the divorce is experienced as a social liberation for these individuals. Their change to being single again may have activated various aspects of social participation, such as, for example, participation in voluntary organizations, performing recreational activities with others, visiting bars, theaters, and taking up dating behavior. Because many of the participants in this change type were involved in a new partner relationship at T3, their social outgoingness might have ended after getting involved in a new partner relationship. It might be the case that the new partner replaced the new relationships with friends, acquaintances, and neighbors that were gained in the first years after divorce. What remains unclear, however, is the relatively low number of in-laws in the T3-network of this sub-sample. This suggests that the family of the new partner is not as eager to invest in a relationship with the focal divorcee as the family of the first partner and it touches upon the social difficulties one may encounter in a second marriage. Alternatively, the divorcee may choose to invest less in relationships with in-law family members after losing these relationships the first time around.

The outcomes of the multinomial logistic regression analyses suggest that, contrary to our expectations, negative divorce conditions were not always associated with network losses, as present in the crisis or strain types. Divorcees in the network strain and crisis types felt either very positively or negatively about the divorce. Divorcees with a long-lasting extension of the network were most likely to experience conflicts with their ex-partner in the period after the divorce. A negative divorce evaluation may deter one's interest or absorb the time available for investments in network relationships for some and trigger the mobilization of supportive relations for others.

Our findings did not support the hypothesized role of personal capacities and structural conditions in determining network changes after divorce. We argue that the distinction of different types of network changes in combination with the small and relatively homogeneous sample may have contributed to the absence of significant results for the personal capacity and structural condition variables. Future longitudinal research in larger nonselective samples of divorcees may shed more light on the role of personal and structural characteristics in predicting network changes after divorce.

We observed strong gender-related differences in changes in the number of network relations. Both men and women had short- and long-term

disruptions of their networks, but the presence and timing of losses and gains differed in the period after divorce. With regard to temporary changes, we observed that for most men the return toward the pre-divorce network size was preceded by a temporary increased availability of relations, whereas women were more likely to withdraw themselves before they start activating old and new contacts. Differential effects of divorce on social participation for men and women may explain why men were more likely to be involved in newly developed contacts shortly after divorce. Earlier cross-sectional studies found isolating effects of divorce on neighborhood integration for men, whereas divorce restricted women more with respect to their participation in outdoor (recreational) activities (Gerstel, 1988).

Being male was, like being female, associated with both a 'negative' and 'positive' change pattern. Men were more in the network strain and temporary extension type, and women were likely to be in the network crisis and the long-lasting network extension type. The more negative feelings about the separation from the (marital) partner and the loss of network relationships for men in the strain type may have mutually affected each other, even after the start of a new partner relationship. We suggest that the role of the (marital) partner in the organization of men's networks may be important in the explanation of differences between men in both the attitude toward the divorce and the changes in the network after the divorce. Women in both the crisis and long-lasting extension type were able to mobilize and develop relationships in the longer term. We suggest that the presence of many alternative relationships for women in the crisis type at the time of the divorce offered the opportunity to end relationships in accordance with one's own preferences.

The question remains as to why women in the long-lasting extension type had relatively small networks at the time of the divorce. Marital conflicts and network losses may have preceded the divorce for women in the long-lasting extension type. Alternatively, women in the long-lasting extension type may experience few losses because they shared relatively few relationships with the ex-partner during marriage. Future research on characteristics of the marital relationship and network changes that precede the divorce may provide more insight into differences between changes in the personal networks of men and women after the divorce.

We recognize an additional limitation of the present study. The sample was too small to examine differences between various interesting sub-samples such as participants who divorced from a married versus an unmarried cohabitation partner. In the Netherlands, long-lasting cohabitation has generally the same meaning as marriage. Cohabiting couples with a registered partnership are even completely comparable in a legal sense. Yet, cohabitating couples are likely to differ from married couples in network determinants such as age and the availability of children. Whether different factors contribute to network change over the long term for persons who divorced from a married versus an unmarried cohabitation partner is therefore a question that needs to be pursued in future research.

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